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Link: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10029297/>

Purpose of the review:

The purpose of this article is to investigate whether symptomatic and/or asymptomatic vaginal yeast infections during pregnancy are associated with adverse perinatal outcomes, specifically preterm birth. Because yeast infections are common in pregnancy due to high estrogen levels and decrease of vaginal pH, they can lead to inflammation in the vaginal environment; the study aims to determine whether this inflammation contributes to complications such as preterm labor, or if it is a benign condition in pregnancy. If there is an association, this can help guide screening, diagnosis, and treatment options in pregnant patients.

Methods used:

This was a systematic review and meta analysis that searched 8 databases, including PubMed, Embase, and Cochrane Library, until July 2022 and included studies reporting on pregnant women with and without labs confirming vulvovaginal yeast infection and preterm birth, low birth weight, or other neonatal complications. Random effects meta-analysis was used to calculate summary odds ratio (OR), 95% confidence intervals (CI) and prediction intervals for the association between yeast infection and outcomes. The quality and risk of bias of the included studies were also assessed to ensure reliability of the findings.

3,909 references were screened and 57 studies were included. Only 22/57 studies reported information about participant vulvovaginal symptoms. Preterm birth was an outcome in 35/57 studies (49,161 women).

Key findings:

- There was no strong association between asymptomatic *Candida* infection and preterm birth
 - The study found that just having *Candida* present without symptoms did not significantly increase the risk of preterm delivery, which suggests that colonization alone may be clinically benign
- There was limited and inconsistent evidence for symptomatic infections increasing adverse outcomes
 - While symptomatic vaginal candidiasis may cause local inflammation, the data linking it to outcomes such as preterm birth were inconclusive and varied across studies, therefore no definitive causal relationship was established
- Treatment of asymptomatic candidiasis did not clearly improve pregnancy outcomes
 - Studies that evaluated antifungal treatment in asymptomatic patients showed no significant reduction in preterm birth or other adverse effects, questioning the benefit of routine screening and treatment in asymptomatic pregnant patients
- Differences in study design, populations, diagnostic criteria, and outcome definitions across studies made it difficult to draw strong conclusions, highlighting the limitations of the study
 - The authors emphasized that more well-designed prospective studies or RCTs are needed to determine whether *Candida* infections in pregnancy actually impact outcomes and whether treatment strategies should change

Application to my patient from H&P #2: 29 YOF at 33 weeks gestation with vaginal bleeding and cramping, with physical exam most consistent with vulvovaginal candidiasis.

While the patient's symptoms initially raised concern for preterm labor, the article ultimately suggests that candidiasis, particularly in mild or localized cases, is not strongly associated with preterm birth. This supports the clinical decision to prioritize ruling out more serious OB causes, such as preterm labor and placental abruption, while managing the yeast infection symptomatically. The study also reinforces that treatment of candidiasis is primarily for symptomatic relief rather than prevention of adverse pregnancy outcomes, which aligns with the patient's management and discharge with strict return precautions.